MENTAL-PHYSICAL EFFICIENCY

MENTAL-PHYSICAL EFFICIENCY

(Dealing with the combination of Psychic-Therapeutic
with Physical Methods for Cure or
Development).

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The beauty of man is his mental and physical
balance; of woman, her grace
and intellect.

FRANK E. DORCHESTER
M.T.D., N.S.P.E.

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No. 1—This photo shows a switchboard of Vancouver a few years ago. Lack of control on the part of the operator or inattention, may mean a loosely placed-in connection. The work of these operators is a good example of the duties of the brain. See Chap. 5. (Photo by courtesy of B. C. Telephone Company.)

DEDICATION

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To WM. C. McKECHNIE, Esq., M.D., C.M.
VANCOUVER, B.C.

My Dear McKechnie,

Your love for your profession, and your unremitting labors to ameliorate human suffering, in the particular specialty you have taken up, and in which you are eminent, induces me to dedicate this small book to you, as an appreciation of your whole-hearted interest in the writer's own work.

FRANK E. DORCHESTER.

Vancouver, B.C.
December, 1913

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INTRODUCTION AND EXPLANATION

IN WRITING this book I am giving publicity to my own thoughts, and do not apologize for writing them. I only lament that I cannot put my ideas in better form.

I must, however, disassociate myself from that section of new thought, mental science or mechano-therapy students who may be termed anti-medical in their views, and narrowly escape bigotry in their writings or teachings. To me, the medical profession is the highest and noblest under heaven. The many years of hard study in theory and practice, together with an experience, which, though a labor of love to most, is nevertheless one of incessant toil, and sleepless nights, is calculated to develop the noblest attributes, as well as the greatest knowledge, that can be used for the good of humanity.

That the bigot in the art or science of healing, who vents his spleen on the medical profession, may have some cause, is admissible, for such a wide profession cannot escape from the grafter, who reckons human life or suffering as nothing, if it lines his pocket. Nevertheless, the true physician earns the respect and gratitude of the public in general, for the honest use of his wonderful knowledge.

However, this book is written, not for the one or the other, but for all who may be students of the healing art in its varying phases, and for those more particularly who have found an interest in that equally noble science of body-building and mental culture, commonly called Physical Culture, the which has established itself as a science in the hands of the real physical expert, that may yet, and should establish itself as the equal of medicine or surgery.

Here let me state that true physical culture must not be confounded with the attempts of those who style themselves as physical experts, because of a fine muscular physique, or because of ability to show in strong man acts, nor for that matter that form of it given by the other extremist, who, having no practical experience, bases his claims on having studied many so-called systems, or read many scientific works.

The true expert must possess a sufficient endorsement in himself, of his power over others, and must also possess a far deeper knowledge of physiology, anatomy and mechano-therapy, than can be learned from elementary text books.

Whilst the medical profession, and the advanced student of mechano-therapy, also mental scientists, know the power of mind, few physical culturists understand it enough to teach their pupils how to exert it, whilst mentalists on the other hand, seldom, if ever, realize that faith without works is useless. Medical men perhaps do not appreciate the actual power of exercise in full. The medical man is too often blamed for happenings caused directly by the patient's own neglect. However, that the physician too often uses medicine to stimulate the functions when he should advise exercise is true.

The explanation is that he must follow or prescribe those stimulants, the effects of which he knows the most, in which he feels he can place responsibility. Though he may recognize that scientific exercise is best, yet, not being able to recommend a competent physical man, he prefers trusting to those agencies the effects of which he knows.

This is best shown by an experience of my own. A patient came to me with broken arches of the feet, the history of the case being that, having broken or partially broken the arches, he had gone to a medical man. The medical man suggested going to a certain physical man he named, who had massaged others of his patients. This physical man in actual fact, whilst being a strong man and an instructor of exercise, had absolutely no sense of proportion, judgment or initiative.

He was just a developed man. He actually prescribed the exercise where the patient raises his body on the toes by the contraction of the gastrocnemeus and soleus muscles. As may be imagined, the strain the arch was so acute that once was enough, and the patient stopped there and then.

The actual process of cure was as follows: He was told to go to bed for one month, or rather for a week or two—the cure took a month or over. The first week he massaged the feet and otherwise rested them. Second week, he performed what he termed toe wiggling, and concentrated on pushing his toes down toward the soles and drawing them up by the actions of the muscles only; he also continued massage and baths. Third week, he was made to put his toes over a bed rail, and put a little extra weight or force on them, until a sense of strain warned him of the limit. Other similar movements were prescribed. In this way he was gradually brought on to his feet, until at last he really could do the exercise prescribed by the first man he went to. That irreparable injury may have resulted, had he continued the first attempts, is assured. As well ask a man with a sprained wrist to try and cure it by lifting a hundred and fifty pound weight daily, which is lunacy. Can one wonder therefore, that unless a physician actually knows intimately what a physical man's abilities are, that he prefers trusting to his own proved agencies.

On the other hand, we find instructors trying to build strong men by forms of exercise that might well be given to debilitated individuals, but which are not likely to build a physique beyond the low normal.

Perhaps this book may do something towards enlightening some of our instructors, physicians and drugless healers on the real underlying factor in exercise or other therapeutics. If poorly presented, my excuse is that these thoughts have been arrived at in studying my own work, and I have never yet read another book on the subject in any form which may have helped me in presenting my own views. MY VIEWS OF THE PSYCHIC ASPECT ARE NOT PRESENTED IN THE OPENING CHAPTERS, which deal with the physical entirely.

For those readers who may be novices in the study of the psychic part of man, it is perhaps advisable to define the conscious and sub-conscious, as dealt with in this book, for their fuller comprehension of its teachings.

The CONSCIOUS is that which we DO, FEEL, THINK, SPEAK, etc., under full conscious control, or in which the brain has full control (of which we are fully cognizant), i.e., consciously.

The SUB-CONSCIOUS, on the contrary, is made up of those actions, thoughts, speech, etc., which are automatic, or done unconsciously, in which the conscious mind is not engaged, generally caused by habit from sub-conscious prompting, such habit having first been created by CONSCIOUS acts done frequently, until the original cause having disappeared, we still perform the action, even whilst consciously engaged in something else. Further, growth, organic functions, metabolism of the tissues, etc., are all carried on by sub-conscious influences, and are sub-conscious. In fact living, life itself, is sub-conscious.

For want of a more accessible subject, I have used photos of myself taken at different periods, to illustrate various facts.

FRANK E. DORCHESTER.

"The beauty of man is his mental and physical balance."

CHAPTER I.

MENTAL-PHYSICAL THERAPEUTICS FOR CURE OR DEVELOPMENT—BRAINS AND EXERCISE

HOW few have given enough thought to the connection between brains and exercise. As Gladstone once said: "Time and money spent in physical exercise pays a greater interest than any other investment." Gladstone knew whereof he spoke. First, known as the greatest Chancellor of the Exchequer Britain ever had, and the greatest of financiers, afterwards a prime minister, he exercised regularly in the **PRIVACY OF HIS HOME**.

The BUSINESS man rarely finds much time for recreation. As a business man myself, it is a familiar topic, and therefore easily understood. I know from personal experience that the time for exercise is not easily spared. Business must be attended to, and often the thought strikes the busy man that to waste time in exercise is wasting money —YET IS IT?

Have you paused long enough to give this matter sufficient thought? Shall I surprise you in stating that by giving FIFTEEN MINUTES, or possibly half an hour daily to EXERCISE at home, you INSURE BETTER BUSINESS RESULTS, CLEARER BRAIN ACTION, GREATER BRAIN ACTIVITY, and also FREEDOM from those occasional or frequent headaches, buoyancy instead of depression, better nerves, appetite, and stronger brain and body? The old Roman phrase, "mens sana in corpore sano"—**a sound mind in a sound body, is** always true.

You admit that if the foregoing be true, that your business MUST benefit. How often have you felt that your brain is not as clear as you would wish? Will it get clearer and stronger through daily systematic exercise?

Emphatically, YES. Every physical culturist has PROVED this, and if the writer may add personal experience, he has never known it to fail. Yet again, you will say: "You say this, but where is the theory to prove this, providing practical proof is not possible on paper?" In answer—some of your own friends may have proved this PRACTICALLY. Get their honest advice. If you have no personal proof let me try to explain physiologically:

During muscular activity a greater flow of blood and nervous energy is sent to every muscle and part of the body (trunk, limbs and head). The growth of muscles is a result of their permanent and steady exercise. According to the activity of the muscular system, so does the process of waste and renovation go on. Activity causes a greater flow of blood, as has been stated, and the restorative process rather exceeds the waste, and new substance and power accumulate. On the other hand, when the body is but little exercised renovation goes on languidly, being less than the waste, consequently the body becomes weak and shrunken or flabby. Bones and brain are subject to the same laws as the blood vessels communicating with them, receive the same impetus, and so send a greater amount of nourishment to them. In breathing we oxygenate the blood when inspiring, and throw off waste when expiring air. Perspiring through the pores also throws off waste, and, therefore by increasing both respiration and perspiration through exercise, we clean the bodily waste out of the system. Then, again, the massage of the stomach and intestines, through exercise, causes these to act properly, absorbing nutriment, and throwing off waste and surplus easily, passing it through the alimentary canal to the rectum. Without activity the waste is carried off insufficiently, clogging the vessels and organs, and this not only prevents the absorbent glands from coming into contact with the food, but the accumulation of waste and food finally ferments, and the whole body is disorganized, and illness ensues. Exercise massages the organs and helps them to throw off this accumulation, relieves the impingement on nerves and blood vessels, increases the blood flow, and so the body and organs are built up.

What has this to do with the brain? Just as the body is nourished and kept in a clean condition by the blood vessels through exercise, so the brain, being a physical body, although the organ of the mind, gets identically the same results, for the blood vessels which perform this duty to the body serve the brain in the same way. A weary brain, a brain stagnating through accumulation of waste in its cells and blood canals, receives new life, stimulus and nourishment, by washing away these accumulations through increased blood flow.

Man's muscles show he is destined for an active existence. Only through activity can health be retained, or regained. "By the sweat of thy brow shall ye earn your bread," might be transposed, "Only by the combustion created through exercise and the consequent increase in circulation, excrescence, vitality and absorp-

This physique was not obtained by psychic effort, or desire only, but by full movements, governed by the brain, i.e., full mental incentive and governance over the muscles as they came into play. Every voluntary muscle of the body can be controlled. Movements without conscious effort would never produce the above results.

tion, can health be maintained." Whether a man be a manual or a mental laborer, physical exercise is absolutely essential to the best efforts of either. Do not therefore allow your bodily or mental vigour to deteriorate, but make up your mind to start exercising today and insure health and wealth. Keep always before you that your physical fitness is not merely a duty to yourself, but to your family, and above all to your country, for a nation's greatest asset is her people, and the condition of that people.

In writing the foregoing, and the next chapter, the matter dealt with is from the physical aspect almost entirely, showing how exercise enables the blood and organs to build both body and BRAIN. The actual effect of exercise, on body and brain, might best be explained by a simile. Try to imagine a dirty, muddy floor; if you pour water on it quietly you will observe the water run over the mud without lifting it. On the other hand, if the water is sent down with force, the force of the water will lift and remove the dirt, carrying it away on its flow. Or again, imagine a filthy pipe, the sides of which are surrounded with filth, a slow flow of water will come out at the other end almost as clear as when entering. Increase the pressure of the water to the full accommodation of the pipe, and force it through; you then observe the water leaving the exit full of the filth and accumulation from the pipe. In just this manner, the increased blood-flow forces the filth from the tissues, and carries it to the heart, from whence it is pumped to the lungs and is then sent out of the body in expiration of breath.

Also, as the tissue walls are not like a pipe—solid, but porous, much of the excess waste is forced through the tissue walls, and out of the body in the form of perspiration. Then again, under the stimulus of exercise and increase of blood-flow, all the other excretory organs take up their work and do their part.

Having removed the clogging waste from the tissue walls, the absorbents, which have been so long covered, and hence unable to absorb anything except contaminated matter, are made clear, and the blood now coming in contact with them, is free of debris, but full of pure matter, which the absorbents eagerly seize, and convert to their own use.

"He who aspires must inspire."

CHAPTER II.

HOW BODY HELPS BRAIN

IN THE FOREGOING CHAPTER it has been shown how the blood builds the body under the stimulation of exercise. The actual fact is so well known and proved the world over, as to need but little explaining by the writer. The subject matter, however, of this chapter is one which is of more importance than anything yet written on the subject of exercise: namely, the effect of exercise over the brain.

Just as the blood builds the body, so it builds the brain and cleanses it. A business man or statesman or any brain worker, who does not exercise, is surely building trouble. How?

This is best shown by another simile. Every reader is aware of the action of a fire or furnace. If a furnace is fixed up in the morning, and the stoker continues to put more fuel on, from time to time, without cleaning out the clinkers or waste, this waste will gradually and surely choke the draught. Once this occurs, all the fuel in the world will fail to burn, and the fire will go out. Directly, however, the stoker draws the clinkers out he re-establishes draught, and the fire burns up afresh, providing he has not over-fuelled and killed draught from above.

So with the brain, it is worked and overworked, combustion goes on, and waste or clinkers are formed in the tissues. Through refusal to exercise, the brain power is dulled; if this refusal is persisted in, out goes the fire or brain activity. By exercising, however (exercise being the stoker), it sends along the blood in force, this force being the stoker's rake, and the congestion of debris is removed, the more the debris, the longer it takes to remove. Directly it begins to move, draught is established, and this increases, as more and more debris is removed. This congestion is known as brain-fag, over-work, and various other names. It is actually physical neglect. This same congestion, applied to the nerve, is known as neuresthenia, which produces complaints of body and brain.

Now once you have the brain at work, you will surely have sense enough to prevent the same thing occurring again.

"One energetic man will energize many."

CHAPTER III.

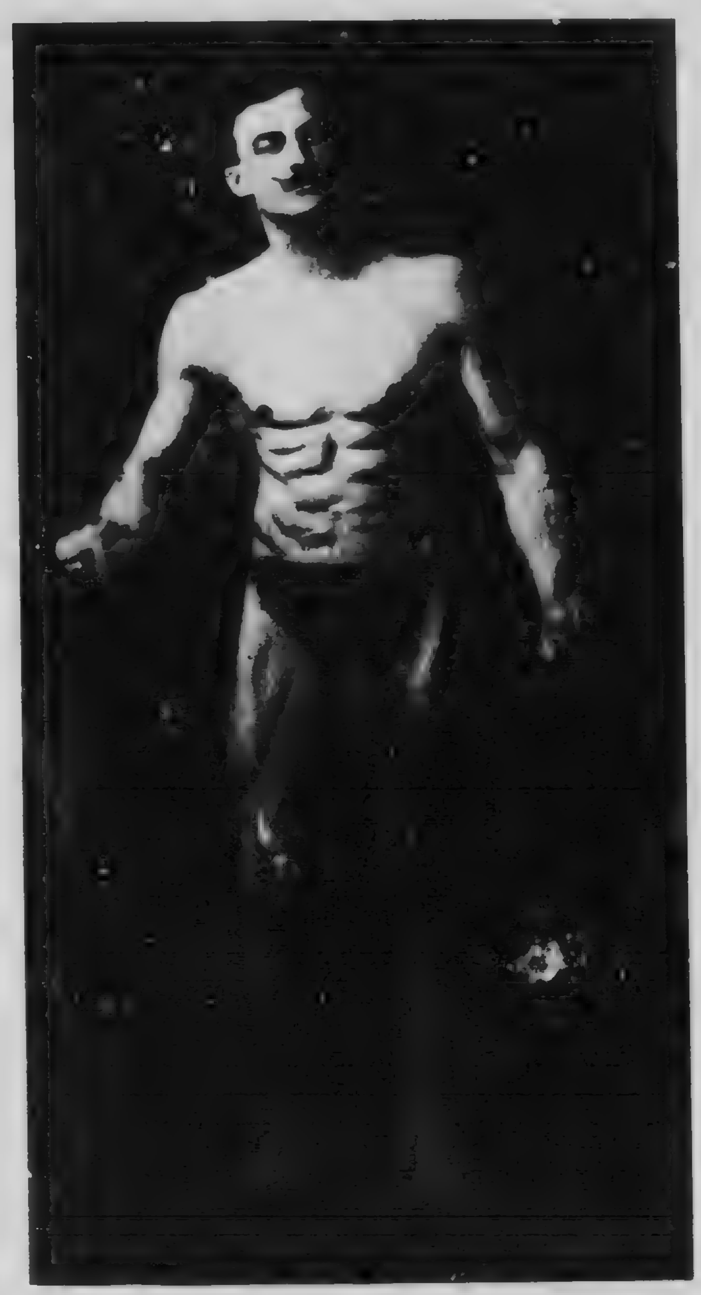
HOW DOES THE BRAIN AFFECT THE BODY?

THE EFFECT of exercise itself, on body and brain, is dealt with, now, for the importance of knowing how to ensure results—by governing every action you make by the brain.

The brain is the important factor in exercise, or mechano-therapeutics, either for cure or development. Where we find a splendidly muscled strong man showing his powers on the stage, we have an example of the fact, that, either knowingly or ignorantly, he had used his mind over his body. When he had been building his body, his mind was concentrated on the particular muscles employed. He may not have known the theory of mind over matter; nevertheless, his desire for results had caused him to make every action with his mind, bearing on and governing the muscle groups that were involved. He may not have recognized the power that he was exerting, and may have been ignorant of the wide range of this power, yet he used it. He would probably be so ignorant of what use he was making of it as to be utterly unable to interpret how to do it to others; or he may recognize that he was using what he may term concentration, but be without the ability to explain what he is doing to others. In fact, the writer has found that after the examination of the methods employed by such men, who have sought to teach others, that they invariably used outside agencies to get the requisite concentration by pupils. They touch on the fringe, and the results produced even by the fringe show the thinker the enormous possibilities of a full knowledge of how to use this power. Their knowledge is from the fringe of the physical side. In direct contradistinction we have the Mentalists, Christian Scientists, and Psycho-Therapists, who also border on the fringe, rather deeper doubtless, but still the fringe of the other side, the mental aspect. By this judicious combination of the mental over the physical, and the support of the physical, to react on the mental, we have beyond doubt one of the greatest agencies for cure that nature can give.

The future holds wonderful possibilities for the student of the mental, plus the physical side of modern therapeutics. The good accomplished by mental healers of all schools, and the marvelous results of mechano-therapists and physical culturists, show us the straight road running plainly before us. The judicious combination makes the perfect whole, based on the fact that man is a psychic-physical being. Chloroform the brain, and the living body is helpless. Take away the muscles of the arm, and the brain cannot move the arm; disconnect a nerve, and communication is lost.

We possess, in our marvelous bodies, recuperative and self-healing powers, which have rusted through neglect and non-use. For generations, probably cycles of time, we have gone to someone for repairs, instead of taking out our own repair outfit, and doing our own repairs. Realizing the limitations, the writer nevertheless believes that just as surgery has its place with medicine, so is psycho-physical therapeutics the equal, possibly the superior of either, in its larger field. Considering that not less than sixty per



The general lines of this figure may interest readers. Here we have an example of independent muscle control; the muscles of torso, especially the abdomen, also the thighs being brought into relief (contraction) without movement, by the brain governance. The abdominals (rectus and oblique) and intercostals (seen at side of body above the oblique muscle) are of such hardness as to withstand a very heavy blow without ill-effect. A natural girdle not only prevents stoutness, but the control of which adds to one's ability to stimulate the sub-conscious functions of the organs beneath.

cent. of present-day sufferers are suffering from complaints which are non-surgical and non-medical, so far as actual medicine is needed, we must then study the possibilities of mental-physical therapeutics. The whole trouble with so-called drugless healers is the diversity of methods and the completeness of none. They cannot be complete that deal with only one side of a whole, and man is only complete if the psychic is taken with the physical, each acting and supporting the other.

In boring the Alps, workmen worked from both sides and met in the centre, thus halving the time. If the impingement of a nerve is preventing natural building and scavenging of a part, the work of the osteopath, in relieving the impingement, is only one part; the brain must establish communication before the good is felt.

In the same way, if exercise is employed to nourish a part, or excrete, the control of the brain in exercise is a perfect combination, working from two sides, and the one in helping the other, through this reaction is itself stimulated and strengthened.

CHAPTER IV.

RELATION OF CONSCIOUS AND SUB-CONSCIOUS

WHEN WE AIM to become master of an instrument, of a tool, or any new undertaking, we concentrate our conscious effort to learn. Through constant application, we so master the intricacies that we may produce the same results automatically, or without conscious effort; this, because the conscious has educated the sub-conscious—the trade, instrument or tool has become a part of us. Watch the blacksmith working out his iron into shape, whilst he himself may be in a brown study, or using his conscious brain power to answer questions put by someone else. Watch a pianist playing a tune, whilst conversing with a friend on some interesting topic. The nimble fingers have gone over the keys so often that they are now dictated by the sub-conscious. Here it must be realized that though one may work or play sub-consciously, as a result of pre-conscious stimulation, yet, unless conscious work is done from time to time, even the expert pianist's or tradesman's work will gradually deteriorate, if his conscious mind never bears on the work in hand. Certainly, he will not advance his powers or ability. The conscious must be periodically exerted. To put this more clearly, suppose a man is a house decorator (painter), for some reason he becomes thoughtful, his mind on something else, yet being expert with his work, his sub-conscious mind causes him to do the work perfectly; but, supposing, however, he has that on his mind which causes him to be always thinking of something else, his later subconscious work will gradually get less perfect, at last, perhaps, even spoiling a job he is doing. Why? Because it is absolutely necessary that he must exert conscious effort fairly often in his work, to keep his work true; the sub-conscious is not strong enough to work without conscious incentive. Conscious effort is the direct stimulant to the sub-conscious at all times.

Further, as the muscles are the first, and natural organs to primarily accept conscious incentive, through them is found sub-conscious stimulation.

Our normal actions and organic functions depend on the strength and education (or control) of the sub-conscious. Only by conscious effort can we maintain life, which is the sub-conscious. Fail to use an arm for a year, it will atrophy or die, for without conscious effort the sub-conscious gets lazy and loses ground and strength. The exertion of conscious effort increases the sub-conscious force. This is the reason that muscular effort is the first law of life, health, physical strength and functioning. Give up conscious effort and your general functions gradually lose strength, i.e., the sub-conscious lacks its stimulation through its only natural channel. Failure to use any voluntary muscle consciously will mean its death or atrophy. The exercise of the voluntary muscles supply the involuntary muscles with their force, which is derived from, and is the sub-conscious; in other words, the sub-conscious depends on conscious effort for its own strength. Consequently, whilst we may act and live by sub-conscious incentive, this cannot keep its power over the body, unless it in turn receives frequent incentive and stimulation by conscious effort.

The more surely we make conscious effort, the more surely we build sub-conscious strength, as well as muscular strength and development.

Hence, this conclusively shows that the stimulation of curative functions and every other function for health or repair, depends first and last on the conscious effort; this in turn proves that health depends on the muscles, and the frequent and systematic use of the muscles. Further, it is easily understood that if these functions depend on the primary incentive of muscular exertion, or mind controlled exercise, the greater the conscious effort, the greater the sub-conscious incentive. Therefore, mind governed exercise is the governing factor in our daily lives, for health and power.

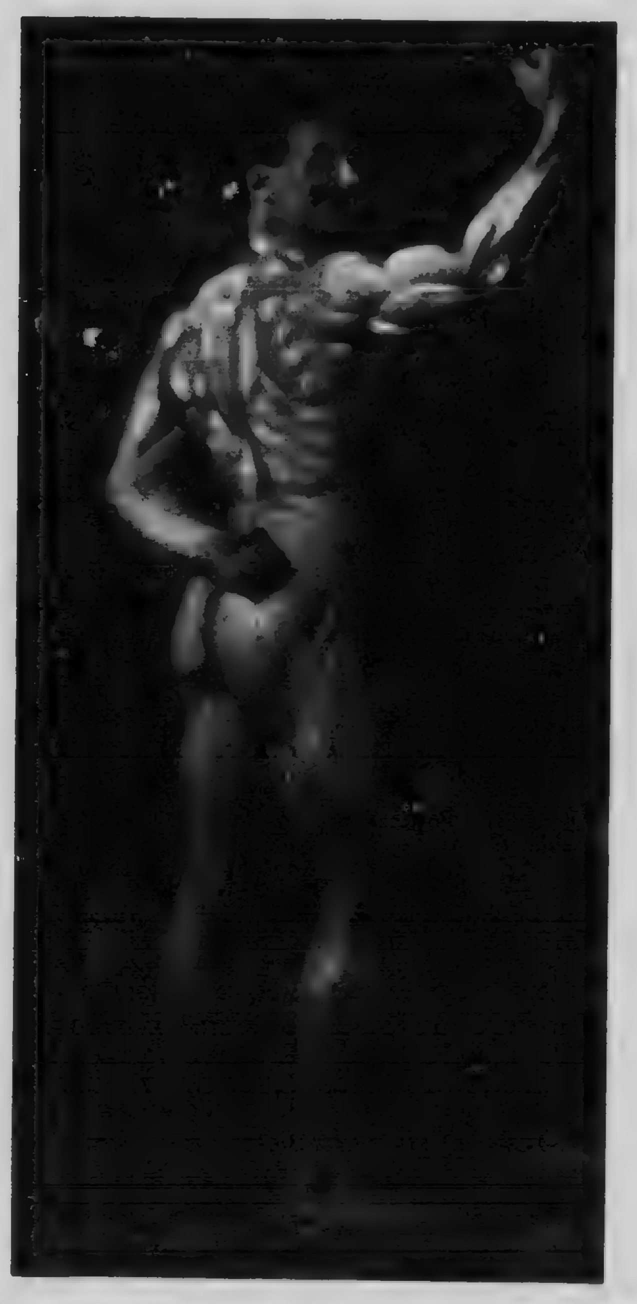
"Physical energy will nourish mental energy, and mental energy will create physical energy."

CHAPTER V.

PHYSICAL THERAPEUTICS IN NEURESTHENIA-PARALYSIS AND OTHER COMPLAINTS

WE WILL presume that neuresthenia is a matter of nerves, caused probably by congestion in tissues surrounding a plexus or individual nerve. This congestion might primarily be caused by any one of a hundred causes, either mental or physical. Generally speaking, it is looked on as an affliction of the mind, because it is a nerve complaint, but the origin may have been entirely physical. Living in an uncongenial climate, Asia perhaps, causing fever and liver sluggishness, then bye-products are forced into the blood, and finally a congestion of some one or more parts. Numerous causes might be quoted, but so far as actual results of psycho-physical therapeutics are concerned, it is needless to quote them. The practitioner, however, if employing this method would get the history of the case, and then deduct from this the probable point of the trouble. For instance, if it be a case as above stated, he could surmise that the liver was in bad shape, and besides prescribing general exercise, see that liver massage takes place. The patient should be taught to exercise with brain control of individual muscles; this would ensure not only the good results shown to accrue from stimulation of blood circulation, and massage of the parts by contraction and extension, but the nerve energy or brain energy, being driven to the part directly by the brain through the nerves, acts in vitalizing as the blood does in nourishing. Moreover, the more the patient endeavors to educate the brain to exert this control, the more this ability will increase, and as this ability increases so will he strengthen will power and character. This control is a great thing, and its exercise will form a foundation in concentration in other matters through life. It is simply like the employment of telephone communication. Just as central pushes your plug home when connecting you with another subscriber, if she is careless and only places it in, instead of pushing it in, the vibration of sound will cause it to fall out, thus severing connection. So by exercising and increasing one's ability to push the plug home, or assume control, through the motor nerve of a muscle, one increases one's governance of the body by its natural governor, the brain. As the fact of accomplished control is immediately messaged back to the brain by the sensory nerve, so all round stimulation is accomplished, and all round results are obtained altogether superior to either a one-sided mind exertion or physical exertion in which the person is not fully aware of the exertion of both; for though an action may be done, and is accomplished through the brain, yet such an action has the value of a telephone connection which is a matter of chance whether it holds a plug or no, as explained above. In fact, action without a purposed intention of fully exerting the mental, has less value than a careless telephone connection, and subject to even greater chance.

Take paralysis; supposing the arm is paralyzed, it is generally assumed that the trouble is in the arm, whilst the fault of connection may be in the arm nerve; yet, might it not be possible that it is be-



Here we have an abnormally slim athlete developed above the ordinary, with perfect MUSCULAR CONTROL, which gives him at 5 ft. 8 in. and 140 lbs. a strength greater than the average 220-lb. man. Note—This shows the back muscles and right arm muscularly controlled, whilst the shoulder muscle supports the arm. The bicep and tricep are brought out prominently by tensing and contracting the bicep until arm is slightly bent; then a counter contraction or control of the tricep is exerted by pushing the forearm away and checking it by a counter action of the bicep. The chapter on Muscle Building deals with the distinction between a FULL contraction and a TENSION, or contraction without movement of a part. This plate gives an instance of control without movement. It is conscious effort, and by driving the psychic force down to the muscle, and so stimulating the sub-conscious, it is this conscious effort which actually stimulates the sub-conscious, will keep tissues healthy if often exerted, but unless accompanied by full movements of muscles, will not prevent binding. If unable to exercise, application of conscious effort alone to all muscles will stimulate the organic functions, but to retain full activity of parts, increased size and increased strength, and full control, together with a maximum activity of organic functions, full movements must be made, subject to this control, i.e., to the full extent of the muscular limits of action Binding, which might ensue, therefore, may not be because of ill-balance, as the control may affect opposers equally, but is caused by the filling in of the grooves, or through thickening tendons not running smoothly. This can be prevented by full actions, done regularly cause the brain is not exerting control enough to push the plug home? This is certainly so in a lesser or greater degree. If the arm be susceptible to pain, the sensory nerves are alive, and in all probability the motor nerve may be fully alive, though exhausted or anaemic; their need is nerve force, which must come from the brain. If the brain is exerted often enough it may yet rejoin the nerve, or rather reconnect and gradually strengthen it to carry more current, until at last the arm is strong again. To fully exercise this effort to assume control, an attempt must be made to accomplish a physical action, thus mental and physical forces are working to a common end. If the nerve is weak through ill-nourishment, the combined efforts, plus blood supply, caused by attempted action, and massage by the nurse, will give greater results than massage alone can ever give.

On the other hand, to merely will for results, without exerting force at the actual point of communication by attempted physical action, will fail more surely.

Where massage has supposedly cured, it is due to the fact that as the sensory nerves convey the sense of stimulation to the brain, the brain instinctively tries to assume control. This instinctive control should be nurtured by explaining to the patient how the brain governs the action, and he or she should daily try to assume this control, not sub-consciously by thought, but consciously, thereby enhancing his or her chances ten times, by forcibly driving the brain force down the nerves in an attempt to reconnect and assume control.

So in other non-medical diseases we may have a powerful curative agent at hand, without quite knowing how to use it. This can only be properly used by teaching the patient the physiology of the effect of nerve control, that he or she may strive to educate the brain and nerve to assume greater and greater control, and thus help all outside agencies and organic forces. At present we leave too much to the sub-conscious; we must teach and learn more of conscious control, which, though almost dormant, may yet be roused to full activity again

The great fact we must bear in mind is that any action accomplished by our own volition, or attempted action, is superior to that done by an operator, and employs more forces than extraneous assistance can give. The operator will always find his work before him, however.

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"*Mental and physical energy are one force.*"

CHAPTER VI.

DEALING WITH THE SUPERIORITY OF EXERCISE OVER MANIPULATORY OR MECHANO-THERAPY OPERATIONS

ALTHOUGH the masseur, osteopath or mechano-therapist may include both passive and active exercise, the latter being where the patient either resists the operator's force or exerts against the operator's resistance, and even though their value is unquestionable, yet, when compared with exercise taken through the patient's own volition, such personal exercise is altogether superior, always providing the patient makes the right movements.

Needless to say, the value of the operator lies in the fact that his scientific knowledge of the needed action required, or a direction of a movement, brings the right muscles into play, to relieve impingement or congestion. Nevertheless, there is no reason why the patient shall not be taught the same movements which shall be done under his or her own volition. The scientific instructor orders the movement—the patient executes them.

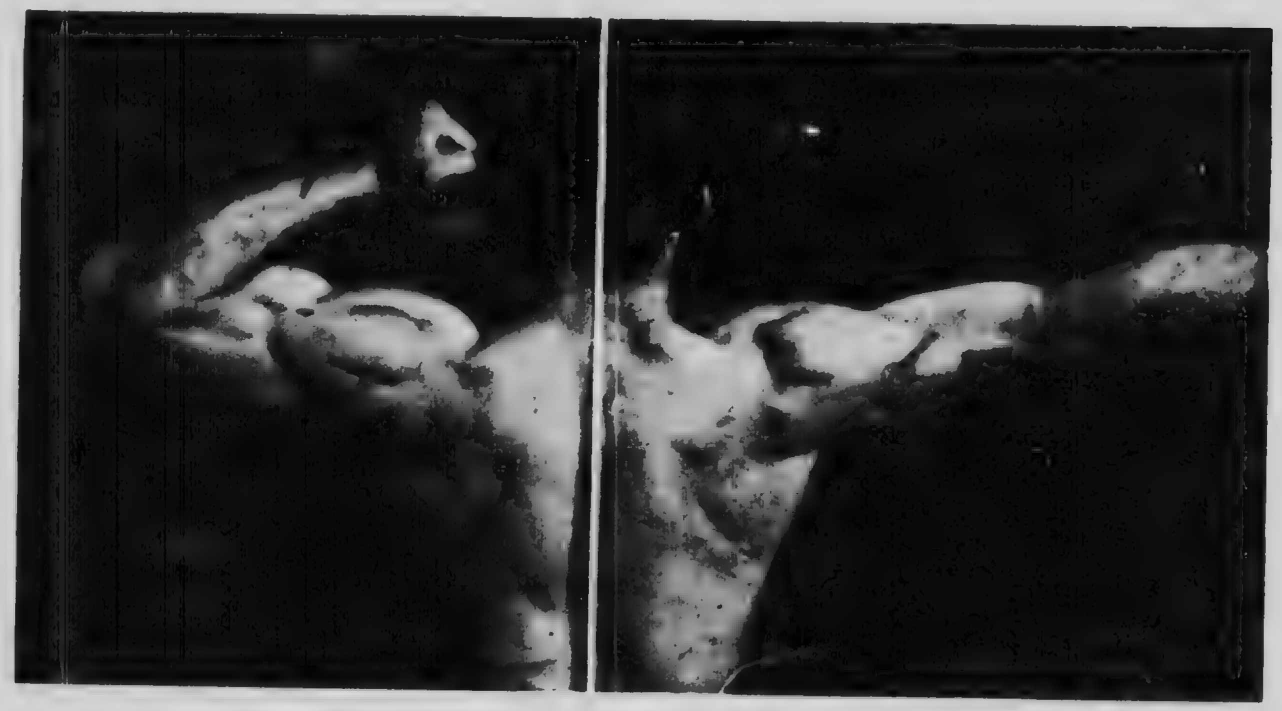
The reader must bear in mind that the writer is not dealing with a case where volition is out of the question. Massage, general manipulation, etc., have their place and time. I refer more to such cases where the patient can exert his volition. The important fact is that the more auto-volition is encouraged, especially under full mind control, the more both physical and mental stimulus is created, hence the governing nerves also receive stimulation and are educated, or re-educated, to take up their work again; further, the fact of a muscle of the back, for instance, being daily contracted and held contracted by mind force, to correct a curvature of the spine, will accomplish the result three times as quickly as if an operator pulls the muscle into the necessary contraction—if this is not impossible—for as a matter of fact an operator at the best can only try to stretch the opposing muscle, which being already contracted is keeping the trouble permanent. Such stretching, however, will not have the continuous effect that stretching caused by the contraction of its own opposing muscle will have, for the more mind force is employed to educate a weak muscle to contract, the stronger becomes the contraction, and so as it gains contractile strength it conquers the gradually weakening contraction of the guilty opposing muscle, which, through constant stretching, has to cede a division of strength to its rival.

That the operator would help the work on by manipulating also would be a logical and desirable fact, but the main work should be done by the patient's own muscles, which must be gradually educated to receive from and act under control of the mind.

It is impossible to conjecture as to what may not be scientifically achieved in the future by students of this science. which is only too little understood. A man can, through imagination, actually experience physical pain, such is the impulse of this mysterious force or fluid derived from the brain. A man may assume such control of muscle that he may cause a group or individual muscle to dance to music through short, sharp, intermittent currents of the brain force causing contraction in the degree willed. He may harden a muscle of any given part to stone hardness without a visible movement, except that of the shortening tissues, and by shutting off the current he can make this muscle as soft as a baby's leg. By exerting this force he can cause a muscle to contract to a three-pound or fifty-pound strength, or more, according to ability. By auto-suggestion he can, and has cured many complaints, through the potency of this force. Faith cures, mentalism, even medicine cures are really due to this force, for how often must the medical man admit to having given a harmless, helpless powder or liquid only to rouse this force into activity. All admit the power, but its due and proper use will never be practical until we have harnessed it and become master of its source and mystery, or know how to understand sufficiently to direct it in an intelligent manner. The most natural and effective distributor is the brain, and the most effective agent is exercise, which done intelligently certainly brings more forces into play for its distribution than any other agency. Not only does exercise become the agent of this distribution, but through increased metabolism, increased respiration, circulation, perspiration and every other body function, the body gives back in an additional degree a greater quantity of this force, or at least the components of this force, which the brain conserves and manufactures, ready for distribution again.

Just as the blood will converge its army of white corpuscles at a threatened spot, just as the lymphatics will send their fluid to surround a poison and discharge it, so must we study how to send this mysteriously powerful force to a diseased or weakened spot; in other words, localize it. Past and present day humanity have allowed its use to lie dormant so long, or exercise it so little, that much of its strength has gone, but like every other human agency it can be brought fully into use again, and if studied and used in conjunction with exercise, it may prove the easiest road to assume a more perfect mastery; for physiologically it is the most natural course to take, to exert it through an agency which calls every other factor into play also, which means a perfect combination of the whole, and a support of one to another.

"Man is mind and matter."



A complex photo. (1) shows the full conscious contraction of the bicep; (2) shows the full extension of same, and full conscious contraction of its opposer, the tricep. A full movement such as this, in full control of the muscles involved, has far higher value than exertion of control without movement or part movements.

CHAPTER VII.

INITIAL STAGE OF EXERTING AND CONTROLLING SUB-CONSCIOUS BY CONSCIOUS EFFORT

WHEN READING a treatise on the power of the sub-conscious influence over the body for cure or development, the novice will probably get muddled and try to exert this influence at the wrong end. There is nothing weird or mysterious in educating one's self to exert this control so as to gradually strengthen its force.

Beyond doubt exercise is the greatest agent in this distribution. The pupil must not therefore imagine things, but must start in to exert the conscious control by exercising with the mind, fully influencing the particular muscle or muscle-group involved.

Take a fifty-pound weight and bring it to your shoulder; to accomplish this it is necessary for the brain to send a weight of nerve force, energy or will power down the motor nerve in a commensurate proportion to the weight to be lifted. Again a simile will best describe this. The arm is like a pair of scales or balances. If you weigh a pound of sugar you put a pound weight on one side and a pound of sugar then weighs up the weight from the other side. So with the arm, the weight is in the hand held by the forearm, the elbow is the fulcrum; it is necessary that the bicep shall receive a proportionate weight to balance up the weight on the forearm; hence if the weight is fifty pounds the brain must send down a proportionate weight of mind force to the bicep to enable it to control and lift the weighted forearm. If on the other hand this weight has to be extended above the head, the brain must send the mind force to the tricep at the back of the arm, and the deltoid, which are the muscles involved in extension. This principle applies to every muscle of the body.

Consequently, when exercising, you should endeavor to make each movement by exerting effort fully, in proportion to your ability. The steady exercise of this function increases its strength. Further, as the scales have to take greater weights (of either mind force or material) the scales must be enlarged, and nature builds them to need.

When first exerting this control in exercise one is apt to work slowly, and even hold the breath. As practice makes perfect, however, one can obtain such perfect control as to exert full influence without interfering with normal breathing. Further, one may make the movement in fast time and yet exert the influence thoroughly. Indeed, the practice of control in both slow movements and fast should be a habit. By contracting fully, then extending a muscle, one first checks the blood flow, then allows it to continue its course with an increased volume that the waters of a river assume when a dam breaks, which clears away everything before it, thus clearing waste and establishing direct communication between pure blood and tissue. When exercising one should first contract a flexor muscle fully, then in extending, the mind should control the extensor muscle, which should be fully contracted as full extension takes place.

Now and again, however, one will find it advantageous to fully contract a flexor and allow it to extend without controlling the extensor, by shutting off power; so that the moment control is stopped from the contracted muscle, the blood may rush in immediately; then the individual attention should be given to the extensor in the same way, and allow it to relax without opposing by the flexor.

By constant control of muscle in exercise is muscle built, nourished and invigorated, and mentality is enthroned in direct communication with the muscles, and so the ability may be gradually extended to the organs. Even muscle control alone will distribute the psychic energy to all organs as no other medium does.

"The brain manufactures energy. The body finds its components."

CHAPTER VIII.

SLOWNESS OF MUSCLE ACTION AND THE SUB-CONSCIOUS

WHEN AN ATHLETE has taken a rest from boxing, wrestling or other sport, and again re-enters the arena, he has frequently slowed up. His critics immediately cry "He is muscle-bound." Though muscle-binding causes slowness, it is not the only reason for slowness, as it more frequently occurs in a splendidly muscled athlete who is not muscle-bound.

The actual reason for such slowness is this: through constant practice an athlete establishes such perfect connections of the conscious with the sub-conscious that directly the eye sees danger, automatically the sub-conscious causes the muscles to act, to prevent the danger. Hence the automatic defence of the boxer or wrestler, or the instinctive change of grip of a falling gymnast. By going out of the game for a time, or a prolonged rest, or a vacation, through lack of the daily conscious control of the sub-conscious, a breach has become effected between the conscious and the sub-conscious, resulting in failure to stop a blow; perhaps, although the eye sees the danger, and the man is conscious of it, the telegraphic communication to the sub-conscious is not in good shape, resulting in a slow message, and a slow response of the muscle. That this is not muscle-binding is proved by the fact that, if the conscious establishes the fact to the sub-conscious that the man wishes to make a move or blow, once the connection is established the move can be made like lightning. The slowness was not in the actual move, but in the interim between becoming conscious of the danger and communicating it to the sub-conscious.

Muscle-binding, however, is distinctly a different matter; slowness ensues here because one muscle, generally a flexor, is developed at the expense of an extensor, hence an unequal pull on the fulcrum, which shortens the flexor and creates an unequal balance. This in itself is a mechanical preventative of control in full, like using a pair of scales which are out of gear or balance; it is a slower job getting a correct weight, if not impossible entirely. Muscles run in grooves, which might be likened to window sashes, and if a window is opened a few inches daily, but no further, in time the winds and rains will cause rust to form, or will warp the grooves above the point to which the window is thrown up daily, and prevent further opening of the window. It has restricted movement. If the window had been opened daily, the grooves would have been kept clear by the action of the window; thus if a muscle is only partly contracted, or partly extended, a similar happening occurs, establishing the physiological need of full movements. Such binding or restricted movement may be caused by lifting weights with only one set of muscles, and not using their opposers sufficiently. Or by the one-sided use of free movements on flexors only, or over much, also in so-called self-resistance exercise, or when the unphysiological counteraction of one muscle by its opposer is made, without making the move full in contraction and extension. It is noticeable that far in excess of the few big-muscled athletes who may be muscle-bound, it exists considerably more among smaller muscled men, who are engaged in certain trades, such as foundries, and is caused by much use of lifting muscles, and infrequent use of pushing muscles, so to speak. Physiologically, a big-muscled man should not be muscle-bound, if flexors and extensors balance. Such are causes of mechanical slowness, which is very different though not less important, perhaps, than lost connection of conscious with sub-conscious control, which is psychic and effects the mechanical anyway. The persistent exercise of the function of phychic control, however, may remedy, in part at least, this lack of mechanical balance, providing the grooves are not too solidly filled in, or the ligaments and tendons too thickly contracted. It would be necessary to consciously control the weak muscles to stretch the shortened muscle out of its setting.

" The mind gives energy. The muscles will distribute it."

No. 2—This photo of a wireman or lineman attending to a wire is practically an example of the ability of certain forces to anastomose an injured nerve. Chap. 9

CHAPTER IX.

THE PSYCHIC INFLUENCES CONTROL EVERY FUNCTION

WE MUST NOT lose sight of the fact that, when medicine or other means are used to stimulate the functions of eliminative organs, glands, lymphatics, blood, the metabolism in the tissues, etc., these are all subservient to the mysterious force which emanates from the brain, and is transferred to the tissues, blood and organs, and which supplies officers, as it were, to direct the work of each department; medicine irritates to stimulate the force to cause the organ to act.

That the conscious exertion of this force in muscle activity actually produces a greater development than any sub-conscious or automatic movement is too well established a fact to need further bearing on. That the muscles or organs which are directly responsible for movement, and are therefore supplied with motor nerves, makes this control an easy matter, is understood. The force transmitted to an organ of the body is the same, but is utilized differently, and is changed in character by the organ, or else it assumes of itself a different character—for the different purposes it carries out.

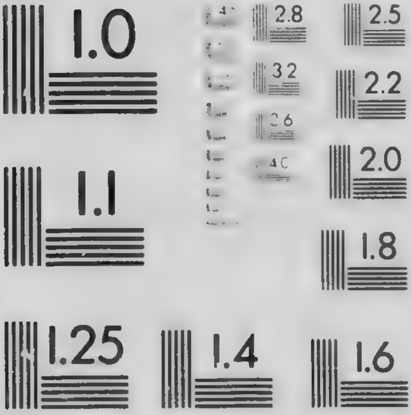
As the brain can increase its control of muscle, why cannot it be educated in the same way to increase its control, in a different form, of course, in the organs and tissues? It has been established that it can, hence Christ's miracles, hence the triumphs so frequently obtained in psychic therapy, auto-suggestion, and so on, which shows we are on the threshold of a science which, once we understand more fully, will revolutionize present methods.

Here again we are forced to believe that to use this force, or rather to distribute it fully, exercise is the natural agent. This is proved by the fact that one is supplied with an easy channel, owing to the natural and direct communication between the conscious and the sub-conscious which takes place in the muscles. The youngest boy of intelligent age (which means established mentality) can quickly learn to control a muscle. Watch the small boy proudly doubling his arm before an admiring group, to show his bicep. This ability can be so easily perfected by practice that it shows the connecting link, by means of which the body shall be thoroughly flushed, or charged with this psychic force, must be through muscular exertion.

It is this force which enables the white corpuscles to move in a threatened direc-

MICROCOPY RESOLUTION TEST CHART

ANSI and ISO TEST CHART No. 2



APPLIED IMAGE Inc

tion, which enables the lymph to build a barrier around foreign matters, and prevent blood pollution; in short, the force is LIFE, and this force is more controllable than we at present have any conception of. This force is negative and positive; whether the negative means negation of ability to get to a part, or is really a negative or destructive force, is difficult to say, but one would think, when this force is negative it is merely unable to supply a part through disconnection, and in consequence that part must die without it, for the part is without life. This dead tissue may lie in the tissues, and impede functioning of vessels, nerves and other organs, causing other complications which spell disease. If this debris is cleared out through the stimulative effect of scientifically applied exercise, functioning is resumed. If the nerve had been impaired, and thus was the cause of failure of the force to leap a gap, the very energy of this force, sent by conscious effort down the nerves, and hence stimulating sub-conscious effort, may cause the nerve to anastomose, or rejoin, for we are wonderfully complete; and just as tissues will heal, so may a nerve be rejoined by this force, which is like a telephone wireman who joins a break-down in communication. If this nerve is a motor nerve, movement itself would be impossible to the muscle it serves, but mental effort, plus blood stimulation by massage, and if possible the exercising of neighboring muscles which are in sympathy, may restore the nerve, if not irreparably damaged.

We must also remember that the internal muscles called involuntary, i.e., heart, diaphragm, and muscles causing peristaltic action and so on, are not consciously controlled, but do their work subject to the sub-conscious. There are cases on record of men who can regulate their hearts. Sudden fear will cause heart failure or diarrhoea. Joy has often put a sick man on his feet, plainly showing that by cultivating a more conscious control of ourselves, we can stimulate the positive properties of this force, and by exerting our mentality to a certain happy end, we send a conscious effort as it were, to forcibly stir up the sub-conscious, which in turn forcibly transmits to the required purpose, stimulating all the forces involved, and so successfully combating evil tendencies in the tissues.

If we believe the foregoing, we have no other course before us than to combine the psychic with the physical in all things.

"Mens sana in corpore sano."

If the sub-conscious has a negative influence at all it is without doubt negative in worry, fear, doubt and so on; therefore where an instructor or operator desires to rouse a conscious effort, to stimulate the sub-conscious, he must establish faith. Sub-conscious faith will make all influences positive, even despite a stated lack of faith. A patient may say he disbelieves and yet deep at the back of his mind have faith, which will be stronger than doubt. With both conscious and sub-conscious faith the influences are at their strongest for good. If a patient undergoes treatment he evidently has sub-conscious faith. Prevent him worrying, therefore. It is better to let him forget his trouble, and let sub-conscious faith do its work. Where, however, he is conscious of faith, needless to say, the sub-conscious influence is stronger.

The sub-conscious is always at work, being the actual motive power of the bodily functions. If the conscious effort stirs the sub-conscious to greater endeavor, the conscious stimulation of the sub-conscious in due season may benefit immensely. In actual exercise, where exercise is possible, and is mind-governed, it is proved to be the greatest builder and scavenger we can employ.

Where exercise is partially or quite impossible, and the scientific operator takes charge, his primary duty is to insure hope and avoidance of worry, and even try to teach his charge to use conscious effort, to stimulate the sub-conscious, to remedy his or her complaint, by supporting the other results obtained by massage, manipulation or other means.

The negative quality of this force is possibly established by the cases we hear of persons becoming sick through suggestion. This removes my previously expressed doubt, for even if due to inability of the force to reach a part, through a nerve as was suggested, the force must have primarily become a negative to cause impediment.

The force is therefore positive and negative. To achieve good results we must educate ourselves to be constantly exerting the positive or building forces to our own good, and to success. Consequently, the man who aspires must exert this force and flood his system with it through daily exercise.

"The nerves are the wires through which energy is carried to the system."

CHAPTER X.

A LITTLE ADVICE AND A FEW RESULTS

THE READER, after reading the preceding chapters, may feel disposed to make a good commencement. I should advise him to get properly instructed in "How to Exercise," by a qualified man; an incompetent man or instructor is to be avoided as a snare and danger.

This book is not written to give a practical system, as the reader can get such from the many competent instructors who are well known, or from myself. This book is written more to give the reading public something to think about and realize.

Should you have a good system at hand, start in to do twenty minutes daily at it, not within two hours after meals, or within fifteen minutes before. Those who can stand it will find a cool sponge down or bath a splendid stimulant after exercise, which should be followed by a rough towelling, rubbing hard towards the heart. If unable to stand the bath cold, use tepid water and quickly sponge down, using the towel vigorously after.

Now, once commenced, on no account neglect to use the mental control of every muscle involved in an action. Here is the weak point of most systems: they give the exercises but fail to point out the exact locality of the muscles, at the most being satisfied by casually naming them and leaving them at that. For that reason alone I have taken pains to make this point clear to my own patients or pupils by means of charts, which I have had copyrighted, as they are the only ones of their kind. They show how to exercise, and where to direct the conscious effort, resulting in a great stimulation of the subconscious forces.

Whilst I do not desire to talk shop in this book, but have written it to stimulate thought in the general reader, it has occurred to me that some evidence of the result of conscious effort in exercise might substantiate my contentions previously given.

For example: A neuresthenic patient, through Asiatic fever, became a chronic sufferer from this nervous disorder. On examination by a British specialist he was told not to exercise, AS IT WOULD KILL HIM. What on earth the doctor meant by this statement I don't know, unless being ignorant of the scientific application of exercise, he had athletics in mind, which no doubt would be dangerous; as dangerous as a man with a weak back trying to cure it by lifting a three hundred pound weight. This patient's brother induced him to come to see me.

His mental attitude was so melancholic that he talked suicide before me. By exercise, plus mind control, together with abdominal massage and manipulating the head on the axis, I cured him of his trouble in three months. I give the credit to the body exertion plus mental exertion mainly. A medical man watched the case at my request; I did not diet, indeed the patient refused to diet.

A tubercular patient who was invalided from the British army came to me. I found the left lung affected. Before treating him I sent him to be examined by a medical man, who corroborated my finding. This man had had plenty of so-called exercise, and was indeed for a time a regimental gymnastic instructor. He followed my method of exercise plus control, and in one month he was pronounced sound by the physician. Today this man is working on one of the hardest kind of jobs possible, namely, bridge construction.

Needless to say, exercise depends entirely on the phase of the disease.

In my office I have on file innumerable letters from ex-sufferers from asthma, diabetes, stomach troubles; of the latter I call to mind one in particular, who had been under a number of doctors, and prior to coming to me had his stomach pumped out seven times. They then decided to operate. This brought him to me as a last hope (I don't care about being the last hope, the odds are too great). Four weeks later he said the pain had stopped. During that time it was varying, one week an improvement was admitted, the next he did not think there was an improvement, then he knew there was, and finally the pain ceased. The fifth week he came to my office and said he had eaten some steak with no ill effects, an unusual thing with him; the sixth week crowned all, by his pleased statement that he had eaten a dish which he had never tackled before without knowing he would suffer, this was fried onions.

I remember this case because on informing a medical friend of mine that I had cured an ulcerated stomach by exercise, he expressed the belief that my diagnosis was incorrect. My proof took three years, when on taking his brother to be operated on by the Mayo Brothers, one of these famous surgeons also examined my ex-pupil, and pronounced, that although his stomach possessed callouses left by old ulcers, he was as sound as a bell. The reason he did not induce his brother to come to me was because he was too far gone. This was probably correct.

for although I believe the powers of the mind may yet find a substitute for the knife, in such cases we are too close to the threshold yet to allow chance to have a hand, or gamble with lives of our fellows. A host of ailments can be mentioned as amenable to physical plus psychical treatment, and all of them not only are cured, but the muscular structures are so built as to place the patients well above the average. So far as the mere muscular is concerned, I have pupils with 47″ chests and 17″ arms. One of such also has a 28″ thigh, and is 74″ tall. This latter is an university student, heavy-weight wrestling champion, who says that, apart from the extraordinary gain made, i.e., from 14″ bicep to 17″, from 41″ chest to 47″, from 24″ thigh to 28″, he finds his ability to study and convey impressions vastly increased, and he finds the last very useful, as he teaches school periodically to earn his university fees. Further, the actual gains in development under these methods are, I believe, higher in the time involved than any others in existence. However, these facts can be gleaned from my office, without allowing this book to be further tainted by shop.

If you intend to commence to obtain a sound mind in a sound body, start right and exercise right. Work with control, don't go beyond the enough stage, and shun automatic movements as waste of time and money. Remember this, that though you exert conscious control, and find it difficult to feel the response as it were, by sticking to it you will eventually get this muscle control; in the meantime the mere effort of the conscious will have so stimulated the sub-conscious as to produce actual results, which you might feel internally long before you see the muscular results. This supposing you were very sick, or fleshy. If you were normally fit you will very quickly feel, and see, the effects in the mirror when stripped for exercise, and when you use the tape to measure.

To get success in any undertaking it is essential that extraneous thoughts be eliminated whilst engaged in the particular work. The singer must have his thoughts wholly engaged on the new song till he knows it so perfectly that conscious effort may be relaxed; it has now become a part of the sub-conscious. The exertion of conscious control, or will power concentration, is the governing factor in everything in life, for success. Nevertheless, as periodical conscious effort is needed to keep the singer in tune, so regular conscious effort on the muscles keep our bodies in tune.

"Thinking must culminate in action for success."

CHAPTER XI.

THE DIRECTOR OF ALL

IT IS WELL TO POINT OUT here that just as the sub-conscious depends on the conscious for its strength and distribution, both depend on something else for positive qualities, or the reverse. This might be called self-will, and the positive distributor of the current, to the conscious, is what is sometimes called conscience. This minute voice, mighty in some, weak in others, acts as the go-between, and in a clean man the sinful effort which self-will may offer receives a check, long or short, according to the strength of conscience, which check reacts on self-will, and prompts self-will to give something better. The strong-willed man without conscience will do wonders of evil. The strong-willed man with a conscience will do even more—for good.

Our holy of holies seems to be will. It is both master and servant of conscious effort, and its strength, used by conscious effort, is felt by the sub-conscious in full. Whilst it lives within the sub-conscious, yet it is linked first to the conscious.

The less will a man may have, though he be born and become physically as strong as a bear, from hereditary reasons, yet lack of will makes him a cypher for good or evil. The actual doer of good or evil will have a strong will, and will use the man of little will for his ends, good or bad. The man who is mentally and physically sound is stronger as a whole man than he who possesses one development alone. Strong mind will organize, strong body will accomplish.

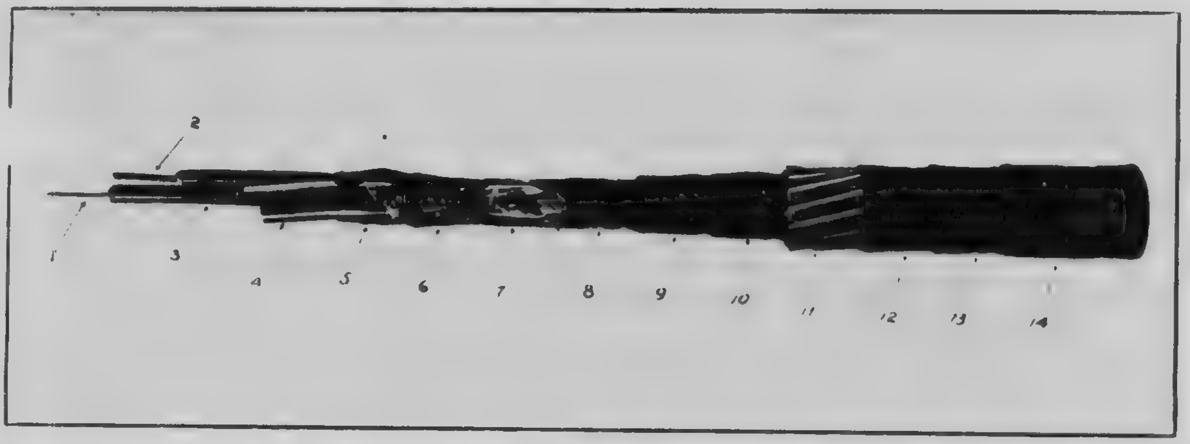
This inner "something" around which is built the sub-conscious and conscious is the true man. Its growth in good or evil lies in its attunement with the Infinite. This attunement is the source of its strength, and upon its strength depends our success.

The man who wrestles in prayer until at last he rises feeling that he sees light, or with an inmost knowledge that his prayer will be answered, has become attuned to the Infinite; his will is strengthened. He who sets out determined to succeed, succeeds because he is attuned, and by keeping his object ever before him, remains attuned, and his will remains strong. His success is assured.

Burn the body of man, small ash remains, for we are largely atmospheric, hence our ability for attunement with the Infinite. We call the Infinite God. The atheist says nature, others Allah, or Buddha; all are right, for they are all one.

That certain atmospheric currents surround each individual, through which his inner man reaches and attains attunement, is undeniable. If we know it, and believe it, we have only one course, to consciously make our efforts in the use of will power on the sub-conscious for our good, or for the good of humanity. Keep in tune.

The ability to make conscious effort depends on self-will, which is master, and the constant use of conscious effort increases will; thus it is dependent as well as master. The stimulation of will in conscious effort, in turn stimulating the subconscious, which re-stimulates will, forms a circle as it were, showing that the death of one means the death of all. For the open door to life for all lies in conscious effort, exerted by conscientious self-will.



No. 3—This cut of a piece of telephone cable is a good illustration of a trunk or main nerve and its smaller nerve branches, which go to the different parts involved. Just as this cable may contain the wire which carries a message to the person, and another carrying an answer back, so do the motor and sensory nerves run together. All of these nerves or wires are controlled from the brain (central). Chapter 11.

CHAPTER XII.

MEDICINE

WHAT is the actual value of medicine? How does it act? Medicine generally does not of itself cure, it simply stirs into activity the tissues, or organs, nerves, etc., in the part over which it will effect the most influence, by irritation or stimulation. The actual cure is performed by the agencies of such tissues which lie at their command. Medicine acts for all the world as a blow in the face might act upon a sluggish individual who had been challenged to fight, but had not incentive enough; the blow, however, stirring the animal passion of resentment, instant action is the result. So medicine stirs the sub-conscious forces of a part to rise from a siesta to extra effort.

If the sub-conscious is the real curative force, and if the sub-conscious receives impulse from conscious effort, would not this explain the cures wrought by exercise, plus faith and belief, in many ailments in which medicine has had both some success or total failure? Yet we cannot afford to accept this as absolute in all, for some medicines (rarely it is true) contribute to the system something which may be lacking. Nevertheless, this something lacking would be the result of some parts of the absorbent system having failed in their work, and if through exercise this is stimulated to absorb the necessary constituent, it will in time render medicine unnecessary. Here we must question whether the food that is being taken would carry it. The only man who might be eating foods which did not contain the constituent, would be the diet crank, who eliminates this or that from his menu on some grounds or another foreign to appetite. The normal eater would find his appetite guiding him, for if a part is not receiving a constituent, it communicates with the alimentary canal, and we have a desire for foods which contain it most. What a proof this is of the sub-conscious influence over our bodies, something even beyond telepathy tells us we want a constituent, and an instant desire appears in appetite.

As normally food is the natural medium the absorbents will take their due. If all are in tone this is so. As explained elsewhere, exercise gives this tone, and stimulates the sub-conscious, which in turn does the necessary work. If a certain part fails in its duty, the sub-conscious must exert, or be directed to give, greater influence in this part. Without a more than ordinary knowledge the instructor of conscious control and psychic effort will get poor results. Hence, exercise without psychic effort may fail. With the combination stimulating the whole body, all the organs and tissues within the neighborhood of the trouble also combine to help their poor neighbor.

Abnormalities of appetite may over contribute, and force the absorbents to take too much of a kind. This is so simple a matter to the physician that a given symptom establishes this fact to him, and he would advise the patient to control them, and so balance the sub-conscious influence. Even such abnormality, it must be remembered, is directly or indirectly caused by lack of conscious control. His reason would tell him that he is taking too much of a certain food, which he may be fond of, and which fondness is first a sign that he can take plenty, but he takes more than a reasonable plenty, as time goes on, and thus perverts appetite.

Yet here again, in the normal individual over-indulgence is punished sub-consciously, as though to protect the system, and a dislike for quite a period ensues. It seems, however, that if this dislike does not put the person off, or is not appreciated as a warning, perversion of appetite ensues chronically. Hence the drink habit, numerous headaches, sickness, etc., having failed to warn, and the initial stage, being persisted in, in mere bravado, socially, or for other causes, the man at last feels that it has established itself as a dominating factor of his make-up. By exercise and conscious control, the latter or both being a hard fight once started, such a person may eliminate the poisons, and eventually become normal.

Where the hereditary perversion appears it is simply a repetition of lost forces, or at least very dormant forces, caused by the non-exertion of conscious control in the ancestors of the persons concerned. Here would be a probable case of inabilty to exert sufficient effort, conscious or otherwise, and medicine might be a good co-operative. Or if the hereditary is unstable, let me say, long years of indulgence has weakened character or will, then medicine may help to irritate the sub-conscious, and help, or co-operate with the will. Medicine still has and will have its place. Let us bear in mind, however, the many instances we have of drunken sots of many years' standing becoming sober, earnest men on conversion, the which are psychic cures entirely, and beyond medicine. Reason's appeal first, then a Divine hope, and an assurance of strength felt within, enables them to exert a conscious control or effort that entirely subjugates the perverted sub-conscious energies. This is indeed attunement with the Infinite.

At no time must it be supposed that the writer undervalues medicine; as a co-operative agency its value must be admitted in some cases, in others it is needless. My aim is merely to inculcate a better valuation of mind over disease, and a better understanding of its value, also of its paramount importance in the building of a man, muscularly or organically.

That the physician should be the best judge of where, and when, is undeniable, and, strange to say, it is often the younger physician who sees clearest, this because as he continues to follow the medicine road or other orthodox methods, he gradually gets into a rut out of which he is disinclined to wander, fearing, perhaps, he will be lost in the bush. In writing this last paragraph an exception must be made of those physicians who give so much time to research in the study of psychic-therapy, or psychic-physical-therapy.

"À votre santé."

CHAPTER XIII.

MUSCLE BUILDING

AUTOMATIC EXERCISE is of such low value in actual development as not to have sufficient status worth discussing. The factors in exercise for development are:

First—Exertion of mind control.

Second—Movement.

These are in part understood by most specialists, and some gymnasium instructors; others never give it expression, if they understand; and only a very small number realize the different phases which make up the two.

In exerting mind control on muscle, we must first take control of the muscle involved. One may contract (or tense) a muscle without moving a limb or part. This alone done often would tend to keep tissues healthy.

One may exert control of, say, a flexor muscle, as though about to lift a weight, and then resist its pull by a counter-action of its opposite.

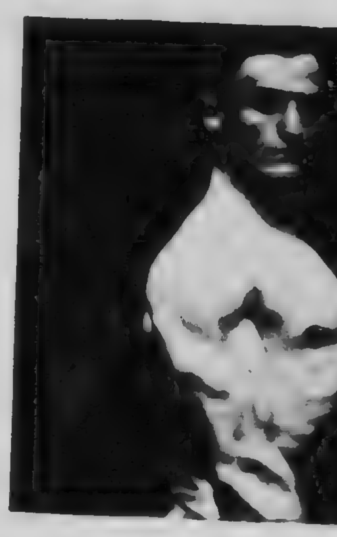
We may exert effort on a muscle by means of weights, or by pressing with one arm against the pull of another arm. They all have value.

However, only by combination with movement can full results be obtained, as if by the first alone, i.e., tensing, the grooves would fill in, the tendons become too thick, and hence the muscle would stiffen.

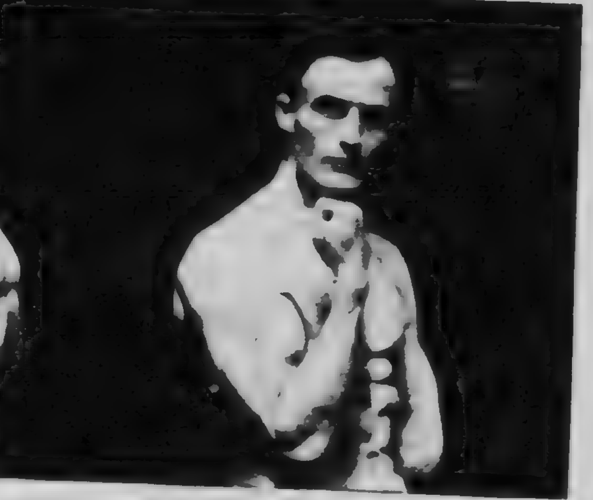
Then, the weakness of making one muscle resist its opposer in movement is that one is apt to work slowly (causing slower or weaker sub-conscious communication), and also fail to make the movements full in contraction and extension, hence limited action and mechanical slowness.

By pressing one arm against another, or an arm against a leg, and so on, we are not much improving on the tensing operation. It has possibly less value from the psychic point of view.

By using weight to cause conscious effort we do not exert the same class of control, as the weight takes some attention, hence the muscle, though fully engaged, has not the full psychic influence. Further, one seldom if ever fully contracts or extends in lifting weights; for instance, if one performs a lift to shoulder, and then over head, the bicep works till the weight is at the shoulder; yet it does not necessarily mean a full contraction of the forearm or the upper arm, i.e., a full bicep contraction. This also applies to rubber strands; seldom if ever is the movement finished to a full extension or contraction. For instance, suppose we open a strand in front of chest, as soon as the strand touches the chest we are apt to rest there, whereas we should get our mind on the back muscles, and be sure to fully contract the contracting muscle, and fully CLOSE the part; then fully control its opposers, and EXTEND the part until the opposer is fully contracted. Here it must be understood that whilst tensing a muscle is contraction, yet the actual full contraction means that it fully pulls a part in a required direction; whereas, to tense a muscle may not necessarily mean to move a part. A muscle may tense whilst stationary, but to contract properly it will move up its groove so to speak, and pull a bone with it. The mind should

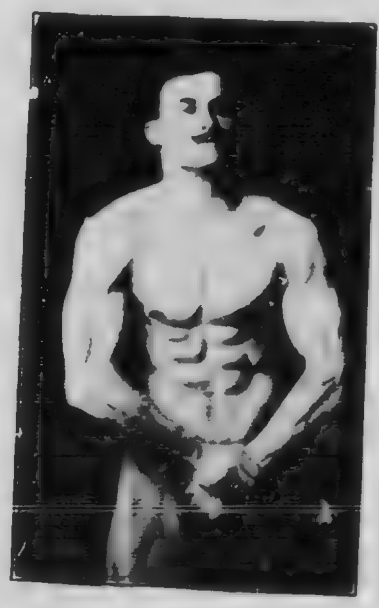


(1) Shows arm straight (extended) with tricep fully under control, i.e., contracted.



(2) Shows a full conscious contraction of the bicep, which has in consequence extended or stretched the tricep. The closed fist is unnecessary to full control of bicep or tricep.

This plate also shows another full movement, the expansion of chest, and full contraction. Note contracted abdominals in consequence.



Here we have the chest muscles (pectorals) and abdominals in a state of contraction, assisted by the tensed arms, which are resisting one another, (1) by preventing their coming nearer the chest; this affects the biceps and pectorals; (2) the biceps by their partial contraction, or tension, prevent each arm from further extension, thus tensing the triceps. The clasped hands act as the fulcrum, on which leverage is based. The hand pressed on pelvis gives greater effect to the abdominal contraction. Yet all can be individually controlled from the brain.

be concentrated on the muscles to the exclusion of extraneous thoughts.

Once, however, the muscles are fully developed, or like a building, the foundations thoroughly reinforced, weights, apparatus, etc., may be employed, and the principles here described should govern just the same.

A man fully developed by mind-controlled exercise, without weights, will have a splendid personality, will-power and perfect conscious communication with sub-conscious, and thus can more easily master any sports, and go far. To try the other means first, or too early, whilst they will get results, will allow of so far but no farther, and the athlete would be advised to make another beginning, to pick up lost threads, which he would quickly find the advantage of.

A man developed as above would normally need nothing further, and would be far ahead of others of his build, but should he wish to EDUCATE the developed muscles to certain requirements, such as weight lifting, gymnastics, he will accomplish it much quicker, and will surprise himself, for though he may not perhaps (although he sometimes may) increase bulk of muscle, yet poise and balance, also control, is so good that his muscles will respond in their education, like naturally brainy students respond to study as compared with less fortunate individuals.

To develop, or try to do so, with apparatus alone, for instance say weights, whilst something results, yet the strained tendons stiffen and thicken, the muscle quality is not as resilient, and he will never go beyond a certain point commensurate with his foundation. He would be wise to retrace his steps if he wants to go as far as he may, if he use patience and persistence.

ATHLETICS OR SPORTS exhaust energy and test strength and stamina. Physical culture builds energy, strength and stamina, and puts the foundation in. Consequently, whilst in physical exercise for building or cure, we must exert fully; in athletics, on the contrary, we must conserve this force, or the energy being too quickly dispersed, we will fail to achieve the success aimed at. The frequent cases of athletes breaking up, are because they strived for success, and constantly strained the foundations, without reinforcing them, and finally the building topples, and disaster ensues, creating much comment on the part of those ignorant of cause and effect. A good simile is to imagine a contractor building a ten-storey building without establishing foundations. Several storeys may go up, and then, as the strain increases, down it comes.

Blood-flow, metabolism, every function of the organs are sub-conscious. A conscious contraction of the muscles not only stimulates the sub-conscious work of blood and tissues, but growth itself is stimulated by exercise, and growth is sub-conscious.

No matter at what angle we look at it, we must realize that health and life itself is only maintained by conscious effort. We must give exercise its place, properly adjusted, as the greatest physician under nature.

As growth of any one part can be governed by direction of the conscious effort to that part, which means the sub-conscious increase of the force in the particular locality, it is but reasonable that with the knowledge of direction we can similarly control the sub-conscious in remedying any weakness, subject always to the judicious expenditure of the force, for it must be observed that overwork of any part will cause a process of self-feeding, hence decrease instead of growth.

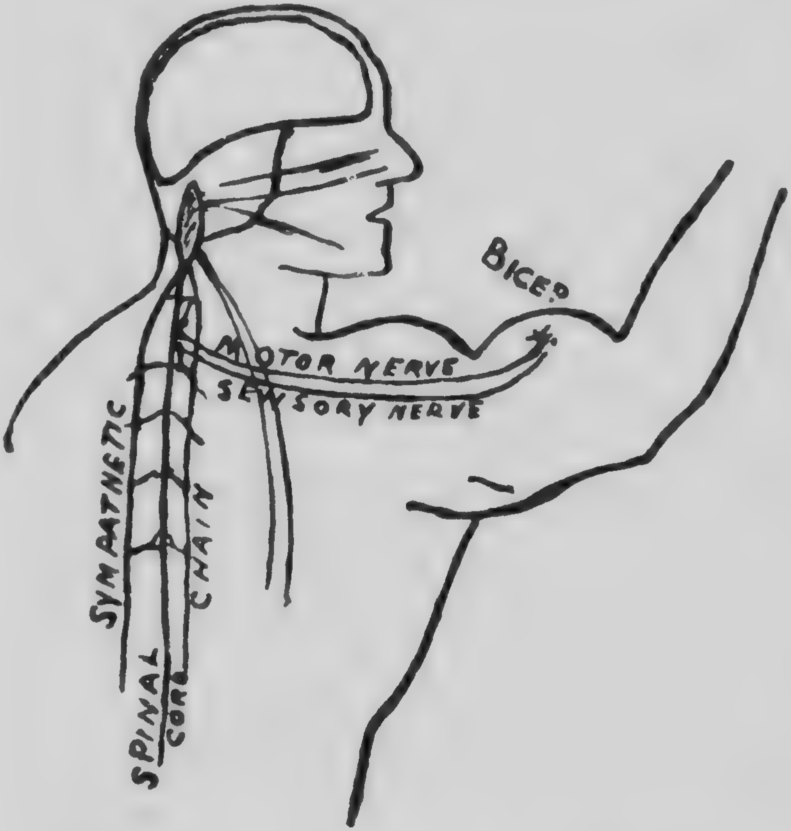
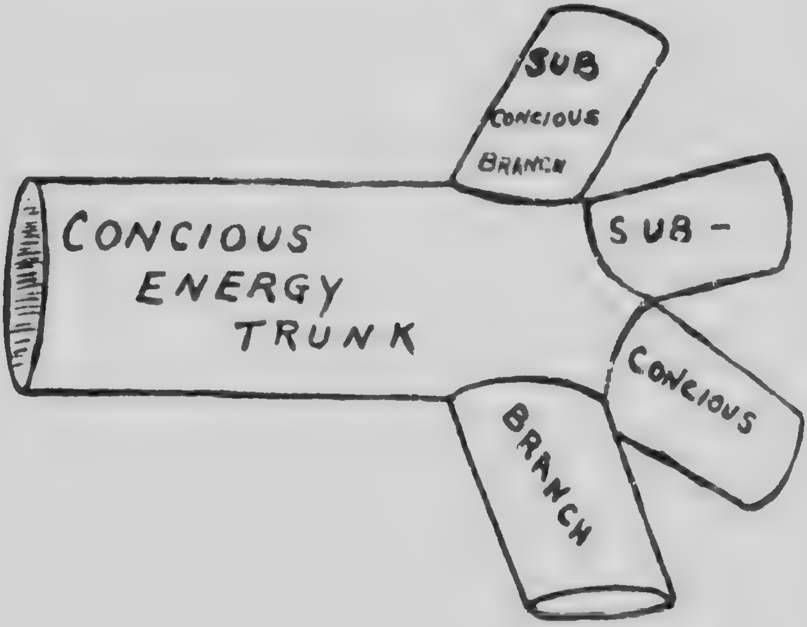


DIAGRAM SHOWING THE MOTOR AND SENSORY NERVES OF BICEP OF ARM

Here it will be noticed that the conscious nerves run together: the one sends the motif, the other carries back the sensation. Linked to the sympathetic chain and spinal cord, they are so co-related that the greater the conscious control the greater the sensation.

The motor and sensory nerves are the conscious nerves and control every con-

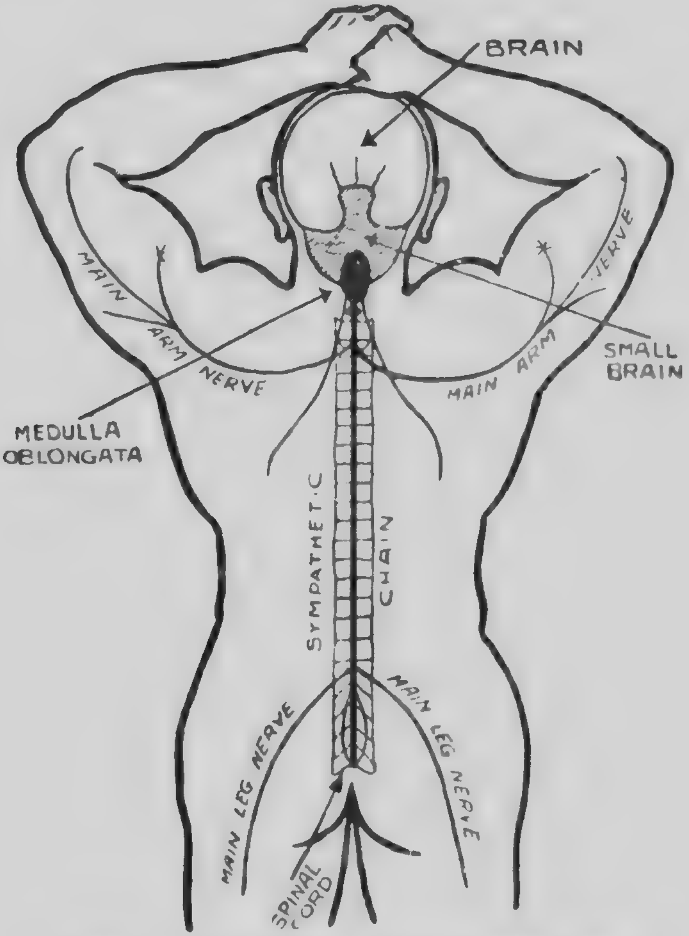


scious function. The sympathetic, however, govern our sub-conscious functions, such as peristaltic action, etc.

Opposite is a rough diagram intended to show the conscious and sub-conscious like a water system; the greater the pressure of water in the trunk, the greater the flow to the branches, which supply the household taps. In the same way the greater the conscious effort, the greater incentive to sub-conscious effort.

Thought, touching the brain at a certain point, causes it to send the current down the nerve to the muscle it wishes to contract. Hence the movement of the muscle. These nerves are the transmitters of conscious control.

Accomplished motion is conveyed back as a message to the brain by sensory nerves. The sensory nerves are as complex as the motor nerves, and convey sense of feeling (comfort or pain), smell,



ROUGH DIAGRAM OF MOTOR NERVES
OF ARMS AND LEGS
ALSO THE SYMPATHETIC CHAIN

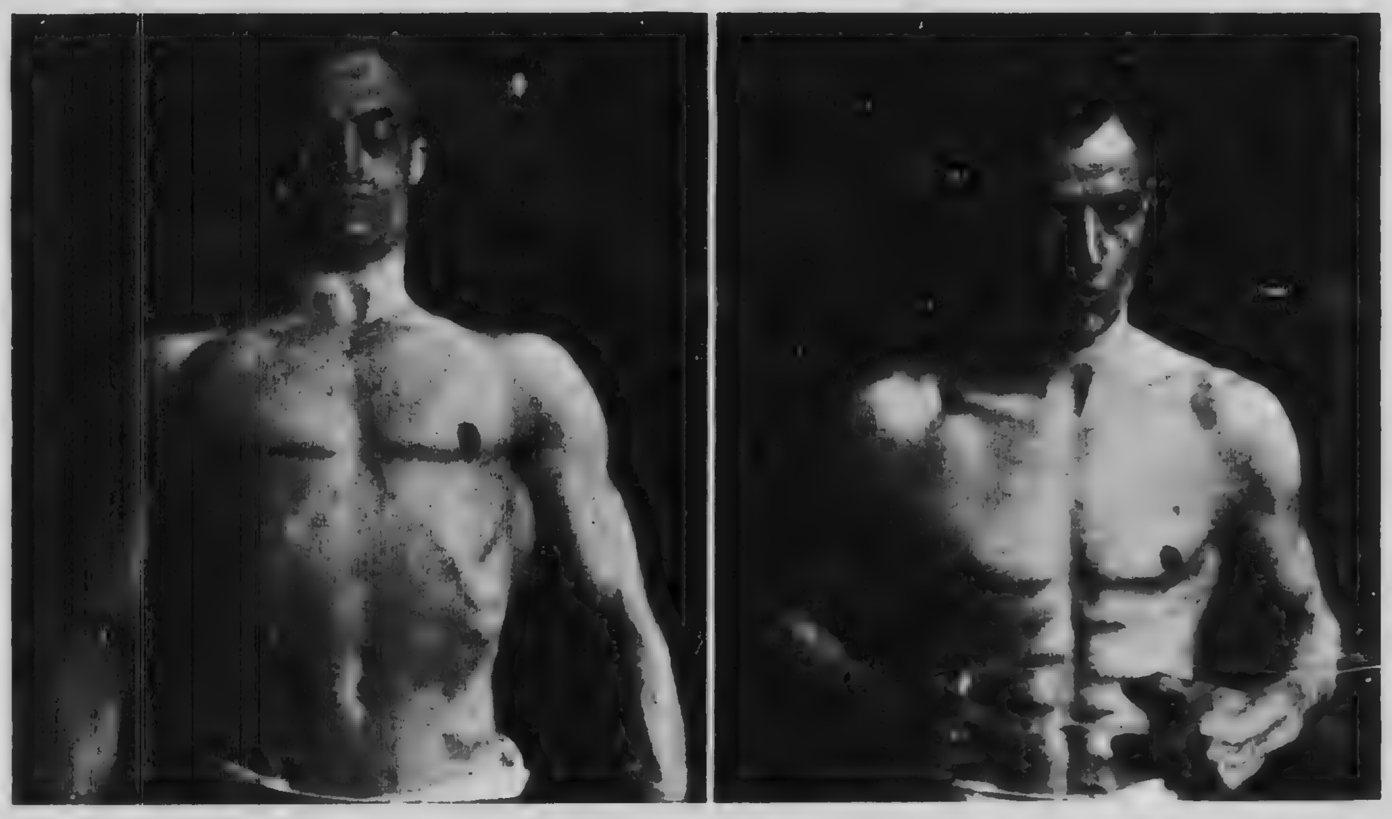
sight, hearing, etc. They are fully subject to conscious effort, but serve, and are served by, the sub-conscious. All are in sympathy, and through the sympathetic nerves pains may be felt in different localities to the seat of the trouble. Whilst they are all distinct in their work, they co-operate in their governance of the body, all being servants of the brain, and consequently subject to conscious stimulation.

In concluding this chapter the writer would point out that the lack of results is caused by not only the unphysiological application of effort on wrong muscles, but also, and more frequently, by the lack of properly directed effort. Any exertion or movement done without due mind governance and conscious psychic effort becomes an actual expenditure of sub-conscious energy, so to speak. This, as was pointed out in a foregoing chapter, is not likely to increase or augment its strength, for it depends on conscious effort for its own supply and fuller distribution. Here again is a good reason why athletics do expend force, and do not resupply on time, especially in athletes whose foundations are shaky, sometimes making prolonged rest imperative. The conscious is on the end in view; to win the event, even if nature is at the breaking point, and not on the body. Does this not give us enlightenment on need of periodical reinforcement?

Valuable though apparatus, weights, etc., are to the athlete or physical culturist, yet he never gets that perfect co-operation of mind with body that he does by systematically educating his mind to control his body, and his body to submit and respond to the dominance of the mind. Whilst the writer throughout has perforce used the term "man," he refers to mankind, hence the male gender is usual; but to man or woman these facts apply equally, and are equally applicable in their effects.

As mind control can be governed and given to the body in any degree from a fraction to many pounds of force, so it is necessary to the doctor, operator or instructor to be a good judge as to what efforts the patient or pupil may exert, gradually adding to, as ability grows or ailments decrease. Rome was not built in a day. Be slow if necessary, to be sure.

"Think and act. Never act without thinking."



This plate shows a full movement. No. 1, the stretching of the abdominals with the deep intake of breath No. 2, the full contraction of abdominals with a full expiration of breath. (A conscious incentive to the external muscles, which stimulates the internal organs and the sub-conscious functions, and gives elasticity to the torso muscles involved.

CHAPTER XIV.

HEALTH AND STRENGTH FOR BABIES

"The boy is father to the man."

IT IS NOT impossible to teach young children how to use the brain in governing muscle action; as a rule, though, it is difficult.

When a child grows, however, to a reasoning or more intelligent age, he or she should be taught the value of concentrating mental effort on muscle action, as explained in a previous chapter.

Nevertheless, exercise to baby is as necessary as exercise to the parent, or the brothers and sisters of more mature and intelligent age. Scientists differ on the probability of heredity. On the other hand, they universally agree on the effect of environment and training.

Baby's health is in the hands of parents or guardian. Dad may reap considerable benefit in the mere fact of exercising baby. Dignity might well be forgotten to mutual advantage by indulging in judicious romping with the pet or pets of the family, if there are several babies.

Judicious romping—use your intelligence in the romp. Entice babies to exert themselves muscularly in forms of movement which cause exertion, but not particular strain. It is simply wonderful the many forms of exercise presented to baby if Dad or Mamma arrange the romp, to force their little playmates to use the greatest variety of muscles.

Ground romping is a favorite with children, and a parent, by showing due care, can not only create health for baby, but may wonderfully increase his or her own digestion by entertaining baby advantageously. Romping will induce the little ones to use every part of their little bodies. Screams of laughter develop their lungs and assist peristaltic action of the bowels. Trying to push Daddy down on the floor, in which Daddy allows himself to be gradually forced down, not only increases energy and lung capacity in the child, but materially affects the digestive organs and abdominal muscles—indeed the whole trunk of the parent.

Never be afraid of a romp. If you value your child's future strength of body and organism, do not let the little fellow be always lonely in his amusements. A child who is allowed to grow up in comparative loneliness is not only super-sensitive and imaginative, but is often the victim of vices which never would have blossomed if healthy recreation with Dad and Mother had been more frequent.

Make an effort in obtaining fresh air for baby. In all weathers you might wrap up to suit, and take your offspring out into the health atmosphere. In fine weather think less of your dignity and more of his or her health, and when baby shows an unmistakable desire to get rid of superfluous energy let him run, and even run with him or her. Add to his enjoyment. You may hardly realize the exquisite delight the mere fact of Dad's joining in will create, or the extra health returns which baby will get, owing to taking his or her exercise under the very happiest circumstances. Remember the boy of today is the father of tomorrow. Build him in body and brain.

As to mind exercise, don't force the budding plant too much. Let natural growth get well started. Don't be too anxious to send to kindergarten or school. Without any displayed intention of teaching, quietly bring facts and factors before the young intelligence. In other words:

"Teach the young idea how to shoot."
—Shakespeare.

Don't try to cram in knowledge, but rather try to teach the young brain how to reason. His future knowledge will later be greatly augmented as a result. We hear of infant prodigies, and their knowledge at so early an age tells us how they have been crammed. This early stuffing is not good. How many boy prodigies ever become men geniuses? Very few, if any.

On the other hand, among the world's greatest men and women are found those whose knowledge may not have been considerable even as late as sixteen years of age, but whose acumen, judgment and reasoning ability had been brought to perfection in observing naturally, and observing nature and facts. Knowledge is not to the crammer, but to the reasoner. My adult readers can themselves remember how they crammed subjects, parrot-fashion, at school, of which they remember nothing now; whilst on the other hand, in cases where for some reason you had to exert your intelligence to get the cause and effects, in other words, where you reasoned the why and wherefore, you have never forgotten, and will not as long as you can use your intelligence or reasoning powers.

A President of the United States, Abe Lincoln, illustrates these facts. Although termed an illiterate and ignorant boy, because he had not book learning, yet he was wiser in his natural observance than many a professor. Once started with a clear reasoning brain, he stopped not until his country's greatest gift was in his grasp. So thousands of such men can be mentioned. Teach the young idea how to shoot, or reason. Combine recreation with useful learning in Nature's schools. When baby asks "WHY?" try and answer and reason out the why. I quite sympathize with that unhappy parent whose boy or girl is a bundle of "Whys" from morning to night. Try to teach them how to reason, and then their whys will have a tangible answer; an intelligent answer to an intelligent "Why". If he be taught to use his intelligence and reasoning powers, unnecessary "Whys" will be obviated.

Bathe baby every day. Twice a week in good, warm water, and other times in tepid, or even cold water, if circumstances and baby allow. Keep his bedroom window well up, for the fresh air of Heaven to have free entry in any weather. The young mother should not worry continually if baby will throw the clothes off. He is only asking for a lovely air bath to harden up and invigorate his little frame. You feel cold, even, let alone baby? Surely you do. You have always wrapped up, and consequently your skin has lost much of its vigor. Your blood does not react as his does. Of course I do not advise you to bring him up without clothes; unfortunately our environment will not allow it, but I venture to state that baby will catch no cold on those occasions when he insists on throwing off clothes from his bed, or shows a desire to crawl around nude. If the air is moderately warm he'll be invigorated rather than hurt.

Referring again to exercise. If the parent has wisely studied the principles of exercise, and has a fair knowledge of his muscle movements, he is well fitted to arrange his romps to the best advantage. In after years his children will rise up in the health which their early environment has given them, and call their parents blessed. Consequently, no parent who gives a thought to the future and health of his children should omit to get a fair practical knowledge of the best method of exercise.

In conclusion: Early training has the greater effects on after life. Educate the brain to reason, and so-called cramming for examination will be a simple matter in comparison to what it is. Build and nourish the brain by systematic exercise, which is a law of life. Better late, however, than never; therefore, even if late in life, you may yet better your mental and physical condition; even if past the three score years and ten.

"Indulge not in regretful retrospection, but with the lessons learnt from the Past, look with high hope to the Future."